

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (Currently amended) A method for detecting motion and filtering noise, said method comprising:

- (a) dividing an incoming image into a plurality of blocks;
- (b) comparing said plurality of blocks to corresponding blocks of a referred image and saving compared results into a declared data structure;
- (c) marking a compared result that exceeds a first predetermined threshold, whereby a changed block corresponding to said compared result ~~is~~can be indicated;
- (d) grouping said compared result into an adjacent region thereof, whereby changed blocks ~~are~~can be regionally grouped together; and
- (e) calculating a deviation value of said region by computing

$(\sum |x_i - x_{avg}|)/(n * x_{avg})$ and comparing said deviation value to a second predetermined threshold, whereby motion ~~is~~can be detected and the noise caused from moire and ~~[[the]]~~an interference resulted from an area brightness variation ~~is~~also can be filtered out,

where $i=0$ to n , n represents a quantity of said compared result in said region, x_i represents said compared result, and x_{avg} represents an average of said compared result in said region.

Claim 2 (Original) The method according to claim 1, wherein a size of said plurality of blocks is 1%~4% of said incoming image.

Claim 3 (Currently amended) The method according to claim 1, wherein step (b) comprises the comparing step as follows:

$$\sqrt{(\sum (a_i - b_i)^2)/(m * m)} / \sqrt{(\sum (a_i - b_i)^2)/(m * m)},$$

where $i=0$ to $m * m$, m represents a side of said plurality of blocks, and a_i and b_i respectively represent a pixel value of a corresponding block of said incoming image and said referred image.

Claim 4 (Original) The method according to claim 3, wherein said

referred image is a prior image to said incoming image.

Claim 5 (Original) The method according to claim 3, wherein said referred image is a later image to said incoming image.

Claim 6 (Original) The method according to claim 1, wherein said first predetermined threshold is 1.

Claim 7 (Original) The method according to claim 1, wherein step (d) comprises employing a double linked list to group said compared result.

Claim 8 (Cancelled).

Claim 9 (Original) The method according to claim 1, wherein said second predetermined threshold is 0.35.

Claim 10 (Currently amended) A computer-readable medium encoded with computer program code for detecting motion and filtering noise,

the program code causing a computer to execute a method comprising:

- (a) dividing an incoming image into a plurality of blocks;
- (b) comparing said plurality of blocks to corresponding blocks of a referred image and saving compared results into a declared data structure;
- (c) marking a compared result that exceeds a first predetermined threshold, whereby a changed block corresponding to said compared result ~~is can be~~ indicated;
- (d) grouping said compared result into an adjacent region thereof, whereby changed blocks ~~are can be~~ regionally grouped together; and
- (e) calculating a deviation value of said region by computing $(\sum |x_i - x_{avg}|)/(n * x_{avg})$ and comparing said deviation value to a second predetermined threshold, whereby motion ~~is can be~~ detected and the noise caused from moire and ~~[[the]]an~~ interference resulted from an area brightness variation ~~is also can be~~ filtered out,

where $i=0$ to n , n represents a quantity of said compared result in said region, x_i represents said compared result, and x_{avg}

represents an average of said compared result in said region.

Claim 11 (Original) The medium according to claim 10, wherein a size of said plurality of blocks is 1%~4% of said incoming image.

Claim 12 (Currently amended) The medium according to claim 10, wherein step (b) comprises the comparing process as follows:

$$\{\sqrt{(\sum (a_i - b_i)^2))} / m * m, \sqrt{(\sum (a_i - b_i)^2))} / (m * m)\},$$

where $i=0$ to $m*m$, m represents a side of said plurality of blocks, and a_i and b_i respectively represent a pixel value of a corresponding block of said incoming image and said referred image.

Claim 13 (Original) The method according to claim 12, wherein said referred image is a prior image to said incoming image.

Claim 14 (Original) The method according to claim 12, wherein said referred image is a later image to said incoming image.

Claim 15 (Original) The medium according to claim 10, wherein said

first predetermined threshold is 1.

Claim 16 (Original) The medium according to claim 10, wherein step (d) comprises employing a double linked list to group said compared result.

Claim 17 (Cancelled).

Claim 18 (Original) The medium according to claim 10, wherein said second predetermined threshold is 0.35.